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November, 1942



Photo by J. W. Enger, Oakes, N. D.

By rare luck the photographer was able to get this picture of a humming bird getting nectar from a glad.



THE OSPREY

By

O. A. Stevens



O. A. Stevens

This is neither a hawk nor an eagle, but a "fish hawk". Differences in structure of feet and plumage have caused many scientists to put this bird in a family separate from the hawks and eagles, though a subfamily is perhaps the most common disposition. There is only one species, found all over the world, but the bird of Europe, Asia and Africa is regarded as slightly different from the American. A third race is recognized in the Bahama Islands, a fourth in Australia and the East Indies, while New Caledonia has the fifth race all to itself.

The plumage is exceptionally dense and firm, well adapted to a plunge in the water. The feet are very large, the claws long, the toes unusually supple. The soles of the feet have sharp, spiny processes which help in grasping a fish. The bird is large rather rangy, with a wing spread about equal to that of a turkey vulture. The wings are quite pointed and a black stripe through the eye separating the white throat from a white patch on the upper part of the head, can be seen for quite a distance. The wings are slightly bent in ordinary flight and this is a good recognition mark.

The birds are quite migratory and of course they must leave our region in winter to seek open water. On account their habits they live mostly along the sea coasts. They are seen occasionally in the Dakotas and formerly nested throughout the wooded parts of Minnesota. The nests are bulky structures, placed in tall trees, sometimes on rocks. Usually three eggs are laid. They are nearly two and one-half inches long, quite variable in color sometimes nearly white, sometimes nearly all brown.

Unlike most hawks, the ospreys often nest in colonies. Gardiner's Island, Long Island, has been one of the best known places in recent years, with 150 to 300 nests. Even larger numbers of birds inhabited Plum Island until it was sold in 1885 to be used as a summer resort. Tree nests are commonly used year after year, sometimes piling up to a height of several feet and breaking down the tree. Sticks as much as four feet long and an inch through may be used. Barrel staves, corn stalks, old brooms and various discarded household articles have been recorded.

Fish comprise almost the entire food of the osprey. Attacks on poultry and small animals are

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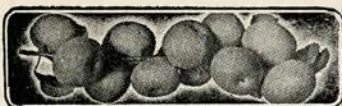
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rarely reported. The birds are relatively peaceful and harmless. They will drive away birds which disturb the nests, but other birds are not molested. Smaller birds often nest among the sticks in lower part of the osprey nest. In the vicinity of human habitations, the birds may become quite tame and are often encouraged because they give alarm if intruders appear. They seem to recognize their friends and are quick to detect strangers.

The former owner of Plum Island had a nest in his dooryard. It was placed on a pile of fence

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NEWSLANTS

By
Harry A. Graves



H. A. Graves

The army has ordered one million pounds of dehydrated apple "nuggets." The claim is made that they can be used for almost anything fresh apples are used for and that "nuggets" are much superior to the old dried apples. Nuggets increase about seven times by weight when refreshed.

I have just rediscovered a very interesting bulletin in our extensive bulletin file. The title and source follows: Circular 149, Herbs and Their Culture, Connecticut Agricultural Experiment Station, New Haven, Conn. Historical comments on the various herbs make the bulletin different and especially interesting. For example, the author has the following to say, in part, about sage: "Sage, as its name implies, was believed to be capable of strengthening the memory. In a manuscript of the year 1393, Sage was used with 'Pygges in sawse sawge', or pork sausage. Charles Lamb in his 'Essay on Roast Pig' recommended the use of Sage in the stuffing. It was thought not only to increase wealth but to prolong life, which gave rise to the saying 'How can a man die who has Sage in his garden?'"

Trail crabapples were a treat on September 22. They were slightly over-ripe on that date here at the North Dakota Agricultural Experiment Station, but very sweet and tasty. Ole Grottodden tells me that the trees have been hardy except for the 1935 blit and are fairly resistant to fire blight. Fruit plantings on the Northern Great Plains should include a tree or two of Trail. While on the subject of crabapples, mention should be made of the fine showing of the Red River crab. We have been increasingly impressed with it here the past few years. It showed about 75 per cent color on September 22 but was not prime until stored for about ten days. It hangs on the tree well like the mother parent Dolgo, is highly desirable when prime, is hardy and disease-resistant and is perhaps the strongest tree on the plots.

The United States Department of Agriculture has developed a mechanical Pyrethrum harvester. When this harvester is commercially available it may change the importance of Pyrethrum as a crop for this country. Previously, Pyrethrum flowers had to be hand picked. This involved a tremendous

amount of hand labor and forced the United States out of competition with other countries in the production of this crop. Pyrethrum has been grown in the past in countries where labor costs have been very low.

Hans Helland of Binford who cultures an extensive fruit and vegetable garden each year, planted some blueberries this spring and was rewarded this fall with fruit. He mixed acid peat moss with the soil about each plant, which no doubt made some difference. Anyhow, we can no longer say that blueberries cannot be grown in North Dakota, without first qualifying the statement.

On August 26, 1942, in Indianapolis, Indiana occurred a wedding of interest to many North Dakota folks. Eleanor Johnson of Antler, North Dakota and George Johnson of Sheyenne, North Dakota were the contracting parties. While students in college both Mr. and Mrs. Johnson worked part time during the school year, and full time during vacations for the Horticultural Department, NDAC. Both were outstanding students and members of Phi Kappa Phi. Upon graduation from N. D. A. C. Eleanor accepted a scholarship in floriculture from Ohio State University, while George was inducted into the army. Eleanor received her M. S. degree in early August and made a very fine scholastic record in doing so. Now as Mrs. Johnson, she has since been awarded a two year scholarship at the same school toward a Doctor's degree.

Madison College of Nashville, Tennessee has done considerable work with the soybean and its many uses. The wide variety of uses to which this crop has been put is cleverly expressed in poetry by Mrs. J. W. Hayward in the September issue of the "Madison Survey."

"Little Soybean, who are you
From far-off China where you grew?
I am wheels to steer your cars,
I make cups that hold cigars.
I make doggies nice and fat
And glue the feathers on your hat.
I am very good to eat,
I am cheese and milk and meat.
I am soap to wash your dishes,
I am oil to fry your fishes.
I am paint to trim your houses,
I am buttons on your blouses.
You can eat me from the pod,
I put pep back in the sod.
If by chance you're diabetic,
The things I do are just prophetic.
I'm most everything you've seen,
— And still I'm just a little bean."



MANITOBA NEWS LETTER

By
W. R. Leslie



W. R. Leslie

Three horticulturists journeyed down to The Pass in early September to obtain some important native plants. Chief among these were Sweetberry honeysuckle, Shrubby Cinquefoil, Snowberry and Mountain-ash. These northern plants are to be placed on McGillvray Boulevard along highway No. 3, on the grounds of Manitoba University, and in the plant breeding nursery at the Morden Experimental Station.

W. J. Boughen, founder of the Boughen Nurseries at Valley River, had a fine showing of fruits. Among the standard apples in good bearing were Manan, Moris, Battleford and Hibernial. Prominent among the smaller apples were Heyer No. 12, Heyer 20, Heyer 6, Rostern 15, Piotet, Rescue, and Trail. Manan is proving so hardy and productive that extended plantings are planned. Mr. Boughen's sandcherry hybrid, introduced last year under the name Convoy, was an impressive sight. The bush is distinctly upright in habit. The fruit is bright scarlet red, somewhat pointed, a little larger than Compass cherry, and has greenish-orange sweet flesh.

Gardens in The Pas were in fine array. Vegetables were of top grade. The town park on the south shore of the Saskatchewan River is attractive with trees, shrubs, hedges and flowers. Some of the private home grounds were worthy of entering competition with those of the Capitol city. Lawns, shrubs, trees, walks, dahlias, gladioli, petunias, snapdragons, marigolds, and zinnias were of high order. Some gardeners were preparing exhibits for the show to be held at Flin Flon, the large mining show to be held at Flin Flon, the large mining centre.

The Porcupine Mountains and the Duck Mountains were having a growthy season. Evergreen and deciduous trees all seemed to be developing nicely. Areas ravaged with fires a few years ago are again green with thousands of young saplings and fruit bushes.

Swan River has many homes surrounded with pleasing gardens, thoughtfully planted and well groomed. About 9 miles to the southwest, at the edge of Kenville, lies the orchard of A. A. Douglas. Much of the early fruit had been harvested. There remained a good showing of crab apples, plums and

some apples. It is encouraging to see two of the Morden Station's early dessert apples ripen typical fruits. These are Mantet and Mortof. Trail, Rossilda and Elkhorn are three of the Saunders second cross apples that are profitable with Mr. Douglas. Osman, Columbia, Bedford, Florence, Robin and Dolgo were heavily laden crab apples.

The group of plant hunters mentioned above came from Kenville to Morden by way of Dropmore. Each of the four in the car expected to revel there among the remarkably extensive collection of plants on F. L. Skinner's Manitoba Hardy Plant Nursery. Three had previously visited June 6 when lilies and roses and lilacs commanded the eye of the visitor. On September 7 the scene had greatly changed but the interest had not waned in any degree. In many cases fruits had succeeded flowers. However, flowers were seen in profusion over a stretch of about half mile.

Mr. Skinner is a scientific plantsman and, therefore, employs the botanical term plants in many instances for the sake of accuracy. The botanical term is meaningful. The common name is often confusing and sometimes misleading. In some instances there are more than half a dozen common names accorded one subject. An example is the Saskatoon-berry. It is hoped that the 1942 edition of the volume Standardized Plant Names will be adopted widely and but one common name accepted for each plant.

The mulberry from Manchuria was more thrifty than the strain from the steppes of Russia. Korean was showy with fruits an inch long. Rosa prumilina Kokanica, with fine glossy foliage and vivid red spines, gave pause to the group as its spicy fragrance filled the morning air. Dwarf Asiatic elm from Manchuria, Ulmus pumila, is much superior in hardiness to the form from China commonly grown on our prairies and usually referred to as Chinese elm. There were tens of thousands of seedlings of the Manchurian form about a foot high that have sprung up in long seed-beds from seed gathered a few yards away in early June. The mountain-ash from eastern slopes of the Rocky Mountains were lit up with countless large bright scarlet berries. This form is more upright and fully as attractive in fruit as the Showy Mountain-ash, Sorbus decora, which is widely praised at the Morden Station. Scarlet Trumpet honeysuckle was allowed to grow over the ground in the rock garden rather than trained up a trellis. The vines were full of gay red blooms. Two European poplars were decked with fresh green foliage, Populus tristis and Populus cordata robusta. This is encouraging this season when most of the poplars have been heavily smitten by red rust that

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GARDEN NOTES

By
W. E. H. Porter



W. E. H. Porter

As winter's chill firm grip paralyzes outdoor plant life, our amateur garden activities are again limited to window decoration. With so much to choose from, a decision is difficult, but for sentimental reasons my first selection is the humble *Bellis perennis*. Aug. 31st. Heavy rain, commencing Saturday afternoon, continuing for 16 hours spordically yesterday, yields to cool cloudiness from northwest with temperature at 58. A belated humming bird darts from flower to flower, golden red being a favorite. Just received the 39th annual report of the S. D. Hort. Society and its perusal conveys two impressions or rather convictions; a great sense of satisfaction in being able to contribute in anyway to its growth and extension and a sense of honor conferred in such a privilege. Tho comparisons are out of place, perhaps the strongest appeal to me is Mrs. Jorgensen's "Some Perennials I Have Known." How nice it would be if we could persuade her to record more impressions occasionally. Tho I am lucky enough to possess thrifty clumps of the bluebell *Mertensia virginica*, she has created a desire for lanceolata also. As a resident on a prairie home farm, Mr. Leslie's article on "Style Trends in Ornamental Gardening" is so full of charmingly expressed pointers that I only wish I could memorize it all. My gold flame honeysuckle, after many years effort, has at last reached the arch of lych gate; the root evidently being heavy enough for such seasonal growth as here it has proved root hardy only. The George Will rose is now over 5 ft. tall; it really is a pillar rose, causing a near by straggling Hansa, also in bloom, to seem most shabby. The place is getting civilized in spots and Borsch's *Dicentra orema* shows hanging bleeding heart clusters of rhodamine purple buds. Sept. 1st. Clearing again and at last with sun endeavoring to break thru. My contest with the birds over raspberries closes, the latter having gone the way of Alice in Wonderland's oysters. The battle of the garden continues with unabated fury, a cow finding a weak spot in the fence, broke thru and apparently spent all night wandering aimlessly up and down, managing to break out in a different spot the poor thing must have been tired out. Last night a pocket gopher undermined a seed bed that was to have been left intact

until spring and thus necessitating transference of everything to another location. Also a stray hen drove home an attack, annihilating a treasured seedling geranium and tearing to shreds an *Osmunda* fern; incidentally my fern experiment is proving a success, my personal choice are stiff Veronese green fronds of a *Woodwardia*. Sept. 5th. Second white frost within a week, no damage as ground is still very warm. Cherries in September, what a luxury; they are from Hansen's Siberian bush type, small black, sweet as the commercial black heart, but without that heavy thirst producing sweetness and very juicy, incidentally, cooking ruins them. Fall lilies now out are pale violet tubes of plantain, *Hosta japonica* lily and a white onion *Allium album*, also a renewal of a pink painted daisy and, continuing since early summer are Borsch's Purity moss phlox, slowly and desirably spreading and free from some source the dark rose Russell Prichard geranium. If it is only possible to have one hardy geranium this should be the choice. Regarding Hereford's yellow delphinium, it is "hope deferred," for after thrifty vegetative summer growth they have retired into dormancy. Sept. 7th. Our final heat waves drifts in with shade temperature of 86. Picked my first ripe tomato; caragana and black poplars defoliated and steady leaf drop commences from boxelders and sumacs change to flaming red and spring in autumn, with catkins springing down stems of the rare but thrifty willow *Salix bocki*. Sept. 17th. At 9 A. M. seasonable coolness, with Tep. at 39 after heavy rain again from the north. Arrival of current issue of *HORTICULTURE* is a breath of cheerfulness from many valued friends. I think the rocket mentioned by Mr. Graves must be *Hesperis tristis*; the night-scented brown flower is unusual, something like a snip of tapestry. I find that it has to be kept in check, as with all rockets, being even more assertive than *matronalis*, with which it seems to hybridize. Seed was obtained some years ago from Thompson and Morgan, of England. My best rocket is also the first to flower in May, bushy, compact plants with large, very fragrant, closely packed white flowers on thick upright stems, perhaps a garden variety of *matronalis*, quite distinct, without that straggly growth so characteristic of the genus. Sept. 19th. Our light to heavy frost forecast for last night materialized, winter's first skirmish successful as regards tomatoes, vines and, praised be to God, the enemy within the gates, purslane. Other garden plants withstood and joyfully noted spears of that rare buttercup *Ranunculus gramineus* push thru and now with summer's color pageant waning fall asters come into their own, the first two being

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FRUIT & VEGETABLE NOTES

By
F. X. Wallner



F. X. Wallner

"Onion scents plus good sence equals many cents."

"Indians say white man heep crazy, make big teepee, plow hill, water wash, wind blow soil, grass gone, door gone, window gone, land gone, whole place gone to hell. Buck gone, squaw gone, papoose gone, no chuckaway, no pig, no corn, no hay, no pony. Indian no plow land, keep grass, buffalo eat, Indian eat buffalo, hide make teepee, make moccasin. Indian no make teepee, build no dam,

no give dam, all time eat, no hunt job, no hitch hike, no ask relief, no shoot pig. Great Spirit make grass, Indian no waste anything. Indian no work, white man heap loco."

The 551,000 acres planted to vegetable crops in California in 1940 brot in about 100 million dollars, more than Florida, New York, New Jersey and Texas produced. Gabe says "In onions there is strength" but too many onions spoil the Brotherhood."

California University has inroduced a new tomato of determinate type named the Pearson; this is a cross between Calif. 55 and Fargo, one of Dr. Yeager's originations. Dr. Yeager's tomatoes have been used all thru the United States and Canada by tomato growers and breeders. Headlines are appearing in the papers, "Food will be scarce in 1943" and the Secretary of Agriculture says: Farm labor will be more scarce and many growers of vegetables and potatoes will not be able to harvest this years crop. I look for a 50% cut in many growing sections and here at home I think that the cut will be even more. A large amount of fresh vegetables was shipped in from the south for the Sioux Falls Technical School where 15,000 young soldiers are studying, that would have been secured from local producers had we been organized and pooled our produce. At a meeting with the Quartermaster, at the Chamber of Commerce, on Sept. 15th, a few of the large growers were able to sell part of their produce for the month of October, but much more could have been sold had more growers been present.

Farmers, Fruit and Vegetable growers, Soldiers and Sailors are not observing any 40 hour week but the laborer can work only 40 hours a week. Many growers are working two or three 40 hour weeks

every week in getting in their produce; the man in uniform is on the job 168 hours a week, but the labor agitator, with his social reform and 40 hour week,, has 128 hours to loaf and spend the fat pay envelope. Sept. 28th. Tonight I ate the last cantaloupe of the season another "Spicy," one of he best this year altho it has been laying around and was cracked, but the taste I will remember long and order more seed of the same kind. This was a bad melon season as most of the crop lay on the ground as the freeze came, some green but most of them decayed; melons are not a crop to thrive in extreme wet weather. "Most vegetables now imported," headlines in the ARGUS-LEADER of Sept. 30th. It states further tha local grocers must now depend entirely on imported vegetables; surely Gabe, or whoever wrote this up, has no conception of the abundance of local vegetables to supply the stores and trucks for another 60 days or more. Cabbage, squash, onions, potatoes, beets carrots, parsnips, turnips are at their best and there are still peppers, eggplant and tomatoes, also. A big reduction in vegetables to be planted in 1943 is now forecast, especially potatoes, beans and melons, also lettuce, celery onions and cauliflower. The army will use more than 50 million pounds of quick frozen vegetables of the 1943 crops of fine vegetables, 6 million pounds of beans, 10 million pounds of Lima beans, 23 million pounds of corn, the same amount of peas and 10 million pounds of spinach. Dec. 10. & 11th., are the dates of the Iowa Vegetable Growers meeting, to be held at Mason City, Ia. The 12 page NEWS LETER of Sec. Fitch is so interesting that several of the S. D. members will want to attend. H. R. Talmage, of Long Island, N. Y: will be at the meeting to tell about potato breeding and late blight. Dr. F. L. Blodgett of Cornell university is expected and will tell of sprays and dusts, Dr. I. E. Melhus of Ames, will tell of blight wintering over in the soil and starting out the next season. The Lake of the Woods potato seed growers will be there; this is where Fitch gets the best Cobbler seed for his growers. Russell Rice has land that has been in onions for 85 years and still gets good yields. Fitch will tell about "Grove Knoll"; Roll is not leaf roll virus. I am tempted to make the trip if Dybvig, Jones, or one or two others want to share the expense. I think I could again win the blue ribbon for best sweet Spanish onions, but they rule that an outsider cannot get the money. Oct. 17th. My youngest boy was called by his draft board today and left early this morning. The big house is a quiet, lonesome place, with the last one gone, yet hard work makes me forget for the day. The Balcony petunias are still in full bloom around the Cathedral grounds on Oct. 18th.



SECRETARY'S CORNER

By
W. A. Simmons



W. A. Simmons

In a recent letter, Mr. Elmer Reeves, of Waverly, Ia., explains his method of preventing rabbit depredation: "For the past several years I have followed the plan of each fall painting the small trees, even in nursery rows, with lime-sulphur and lead arsenate. It is quite a job to go over the nursery with this but it does the job completely. I have the mixture thick enough to show well on the trees and use an old paint brush." As Mr. Reeves says, it is quite a job, but no more so than painting the trees with anything else and if the rabbits can't be fenced out, and in a winter of heavy snow-fall, this is almost an impossibility, painting the trunks and lower limbs seems to be the only thing that offers any hope of success. When again we have to depend on shipped in fresh carrots, we may find them with a military hair cut, as shippers are being urged to cut the tops to a 4 inch length, thus saving 40% of shipping space and also on boxes and nails. We are told by the U. S. Dept. of Agriculture that some varieties of fruits and vegetables are richer in vitamins than others. The peel of an apple has more vitamin C than the flesh and the rosy or sunny side, more vitamins than the shady side. The vitamin A content of butter varies with the breed of the cow, with what the cow eats, whether she is stall fed or on pasture, and with the length of time after calving when butter is made. Vitamin C contents of citrus fruit depends on the variety, time of harvesting, even on the location of the tree in the orchard and the fruit on the tree, on an outside or inside branch. So, as it is impractical to get too nosy about the private life, food or the table manners of our cows or the particular place our fruit was picked from, let's forget about the whole thing. Dr. A. N. Pratt, editor of **TENNESSEE HORTICULTURE**, writes: "Consider the tomato of the field—seriously. The story of the rise of an almost unknown plant, the tomato, from a despised and presumably poisonous wildness to the third ranking vegetable of this country in less than a century, rivals the fiction of Horatio Alger. The N. J. **HORTICULTURAL NEWS** gave the 1941 figures on the value of the tomato crop in that state as \$8,460,000. Frequent warnings have been sent out that there will be few if any commercially canned tomatoes for domestic consumption this year, as the government has placed orders for 40 million cases and this is nearly

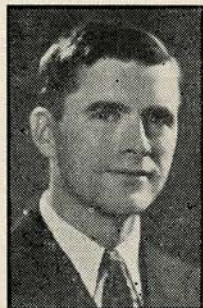
double the average production for the 1931-1940 average of 23,437,000 cases. The acreage was stepped up considerably this year but unless housewives have put up tomatoes for winter use, they will have to do without." As the time is approaching when most of our magazines need to be renewed, we advise all our readers to send us a card with the list of publications that you desire to renew, or the new ones you would like to subscribe for. We will quote you the price we can get them for you, which in most cases will mean a substantial saving for you. We would like to save you more than the annual cost of our dues so as to make membership in our Society a good stroke of business. As an invariable concomitant of a wet season, we had some mosquitos here. In fact we thought we had all there were, tho I have been told confidentially that there were a few elsewhere. The ones that were here were poor sports, they wouldn't wait in their attack, till I could get my pipe going to gas them. The weather of October has been very lovely, not even a frost, seemingly satisfied that September ended the gardening Season. Mr. Rex Warren, our local rose authority says his roses have started to grow again, apparently not believing all this talk about approaching winter and fuel shortages. In the vegetable garden, a late sauer kraut crop seems in the making while turnips, lettuce and most weeds, seem to be doing well. One of our eastern members wants some one to tell him what is the best flavored Aericana plum. Professor McCrory thinks this is a matter of individual opinion and says "I feel he must be the one to answer this." I believe scattered seedlings of these plums may be of higher quality than any that has been named and that better ones will appear in the future, as more seedlings are allowed to come to fruiting. From local retail prices, it looks as tho the apple deal is going very well. Good Delicious are offered at 12 cents per pound. One can only hope that the growers are getting a good share of this price and it don't look as tho much of an effort is being made to move the 3 million bushel larger crop than normal, this year. Anent the best American plum, President Gurney writes "I think the Cherry plum is the outstanding of all American plums." Never heard of it.

The armadillo, which geologically speaking is over 5 million years old, has invaded the United States in recent years, pushing its way over the international boundary line into Texas. An insect-eating animal with long, sticky tongue, this "armored pig" roots in the ground like a hog, is destructive to Texas truck crops. Most extraordinary fact about the armadillo concerns reproduction. Mother always has 4 offspring, identical babies, all the same sex and as alike as peas in a pod.—Gib Swanson, in *Capper's Farmer*.



BEEKEEPING NOTES

By
J. A. Munro



J. A. Munro

the feeding up on honey, which is a heat producing food.

At the approach of cold weather in the fall when the hive temperatures lower to a point where brood-rearing is discontinued, the colony makes special preparation to protect itself from the cold. When the temperature of the hive reaches 57°F., the bees assemble from all parts of the hive to form a more or less spherical-shaped cluster and remain in this formation as long as the surrounding temperature is at this point or lower. The cluster is composed of thousands of bees whose activity, during the wintering period, is regulated largely by the surrounding temperatures. The bees on the outer surface exchange places with the bees within the cluster, and serve as a constantly changing insulation wall. The activity of the bees and the amount of honey they consume increases in rate as the temperatures surrounding the cluster decreases until such a point is reached where the bees become exhausted and die from the cold. This explains to a large extent the necessity of protecting colonies so that they may winter over with the least expenditure of energy and the minimum consumption of stores. It is known that excessive expenditure of energy by bees shortens their lives and results in a condition commonly referred to as "bad wintering."

MANITOBA NEWS

(Continued from page 124)

made the trees dingy and prematurely bald.

Mr. Skinner's new hardy hybrid chrysanthemums were of keen interest. Three recently named varieties were noted. Sunburst is deep golden yellow, Dr. Speechly a reddish hue, and Dr. Graham a pink. New hybrids of the hardy white pyramidal phlox supply a needed range of colour by adding reds, pinks and mauves.

QUESTIONS AND ANSWERS

By
S. A. McCrory



S. A. McCrory

How may dried beans be protected against weevil?

The weevil eggs are usually deposited on the bean while it is in the field. Such beans even though stored in weevil-proof containers will become infested. To control the weevil the beans should be placed in a container with a tight fitting cover as soon as they are harvested. Carbon bisulphide in an open dish placed on top of the beans and left over-night will destroy the insect. From one to two ounces will be needed to give this treatment.

When is the best time to harvest carrots for storage?

Carrots will stand a light freeze without injury. It is therefore advisable to leave them in the ground until the ground begins to freeze.

Can celery be blanched in a pit in which other garden vegetables are stored?

It is possible to blanch celery by storing it with other vegetables in a pit. However, I think most storage conditions will not be found desirable for this. It should have considerable ventilation since it will make quite a growth in storage. There is sometimes danger that it may absorb objectionable odors from cabbage when stored in the same pit.

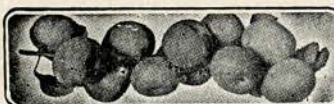
Is it advisable to save seed from Golden Crossed Bantam Sweet Corn provided no other corn grew near my garden this year?

It is not advisable to plant the seed of any hybrid sweet corn the second year. This does not mean that one can not get a very fine crop from such seed, but the chances are decidedly against taking the risk. Golden Crossed Bantam is a hybrid which means it is a cross between two inbred strains. This type of cross produces a very fine yield the first year after crossing, but is likely to break up into a large number of different strains after the first year. The cost of seed is so small when compared to the other costs of producing a crop that one should not take the risk of planting questionable seed. I would advise that you get seed of your favorite variety or hybrid from a reliable dealer.

Is there any way I can reduce potato loss due to storage rot?

Mechanical injury is probably the greatest cause

(Continued on page 131)



THE BIOLOGY OF THE BLACK HILLS

By

H. R. Woodward



H. R. Woodward

The biology of the Black Hills area, like any place else, must necessarily be divided into the plant and animal groups otherwise known as the flora and fauna. In a discussion of this kind it is also necessary to mention the life zones to which the native and exotic species naturally distribute themselves. Like much of the surrounding area, the Black Hills have changed from a country of native grasses and abundant wild life, with settlement and much of the former life forms are gone.

The life zones include the upper Sonoran with its soap-weed, sage brush, cactus, greasewood, and horned toads; the Transition with its Ponderosa, or Western yellow pine, its kinnikinnick and its rabbits, wood chucks and deer; the Canadian with its water ousels, spruces, aspens and paper birches. The greater portion of the Black Hills is in the Transition life zone.

In the first place, it should be mentioned that the Black Hills was the original home of one of the largest species of grizzly bears known on the North American continent. General Custer was known to have killed one, and some fifteen years before Custer's time, Captain Reynolds on a military expedition visited the northern edge of the Black Hills and his party killed a mother bear and two cubs. There were thought to have been one hundred twenty five such bears in the Black Hills in 1874. Three years later they had become extinct. I have in my possession a steel trap used in trapping grizzlies. It was found near the headwaters of Rapid Creek a few years ago. Mountain sheep at one time grazed the slopes of the Black Hills and the panther or mountain lion was here in considerable numbers. Perhaps it is not commonly known, but the various species of trouts in the streams of the Black Hills today are all introduced species. General Custer described the streams as likely trout streams, but only native suckers and chubbs were to be found.

Black Hills flora represents a type not found elsewhere. There are probably to be found some thirteen hundred different varieties of plants on all the Hills region. Some plants have come from Southland as the cactus, the southern maidenhair fern, the Mexican poppy and the mariposa lily. From the East we have the violets, the oaks, the sunflower, the black-eyed Susan and the cotton-

woods. From the West has come the quaking aspen, the columbine, the monkshood, the wild geranium, the Rocky Mountain bee plant. From the North, the Canadian white spruce, the kinnikinnick, coral root, pine drops, and wintergreen.

The most characteristic of all Black Hills trees is our pine tree with its cinnamon-brown bark several inches thick and resistant to all sorts of weathering even in some instances to fire. These trees have three long needles in a sheath and attached to limbs which reach out after light in widely separated fashion, giving the tree an unsymmetrical, ragged appearance. The trees which grow in dry, sterile soil, are heavy with pitch, while on north slopes in deep loom, the wood is light and soft. For the first fifteen years of a tree's life it makes small development, but a good root system. For the next hundred years or so it grows rapidly, and reaches maturity at about two hundred years. There are some, no doubt, three-hundred fifty to four hundred years of age to be found in certain sections of the Black Hills. They are very irregular in the production of seedling trees. In a favorable year they reproduce thousands, after which there may be an interval of ten years in which no young develop. The fall of 1936 was a year of great seed production. The seed crop that fall attracted such birds as Clark's nutcracker from the forested regions of the Rockies, a bird not seen in any great numbers before nor since in this area. The dark appearance of the Ponderosa Pine in thick stands covering the hillsides has given us the name, "Black Hills."

The establishment and maintaining of a State Park within the Black Hills area has done much to preserve wildlife. Herds of elk, mountain sheep and bison have been reestablished. Antelope, white-tailed and mule deer, coyotes, badgers, porcupines, rabbits, woodchucks, squirrels and chipmunks are plentiful. The black bear of the Rockies has been introduced but so far his habitant is confined to the Game Lodge Zoo.

Park Ranger Estes Suter, gamekeeper at Wind Cave National Park, has for many years catalogued the birds he has seen in the region. At the present time, Mr. Suter has listed and described some one hundred seventy different birds. Our supposedly State bird, the western meadowlark, dominates the area, and is one of the first birds to arrive in the spring and last to depart in the fall. Our chief permanent residents include the magpie, slate-colored junco, nuthatch, hairy and downy woodpeckers and the ruffed and sharp-tailed grouse.

In a brief discussion such as this it is impossible to mention more than a few of the outstanding species, nor is it possible to refer to them all in detail, interesting as these details may be. As such, my description of the fauna has been brief.



GARDEN CLUB GLEANINGS

By
Juanita E. Jorgensen



J. E. Jorgensen

Already, reports coming in from Garden Clubs over the state make me prick up my ears in anticipation of the success of this new department, and in amazement at the work these garden groups are doing.

Here is this new-born club at Brookings, scarcely out of its swaddling clothes, springing to constructive action and turning in \$150 from their Victory Garden Harvest Show. Dell Rapids, with two weeks in which to prepare, put on a show that netted over half that amount; and proceeds from the Rapid City show came to the handsome sum of \$250 for soldier and sailor relief, according to a letter from E. A. Gates of that city.

From Lead, Mrs. Wm. Frackelton, secretary of the garden club there, writes on interesting letter about their club in the Mile High City. We were in Lead this summer and noticed the floral plantings in the lower part of town. Left deserted when city building followed mining operations to higher hillsides, this original townsite had long been an area of houseless foundations, caved in basements, and weed-grown lots until the Garden Club began working on this beautification project. They have already made a fine advance, and we shall be looking forward to more details on the work and its accomplishments than is given in Mrs. Frackelton's letter below:

"Regardless of the War Clouds and the many war activities here in Lead, the Garden Club has, under the leadership of Mrs. L. H. Robinson, held their meetings as planned for this Club Year, and also had their Annual Flower Show.

This year our club stressed three projects which were "Further Improvement of the Sinking Gardens," "The Conservation of Wild Flowers" and "Victory Gardens."

On account of the subsidence of the surface of the ground over the Homestake Mine Workings, many of the business houses and residences on Lower Main Street and Mill Street have been torn down, which left that part of our city very unsightly. Under the most able supervision of Mrs. A. D. Bell, a committee on Civic Improvements, the generous help of the Homestake Mining Company, and also the help and interest of almost every person in Lead, a miraculous change has taken place in that part of our city. The name "Sinking Gardens" was chosen for

this spot by the citizens from a long list of names suggested by those interested.

A committee on the conservation of wild flowers has been working for two years, and while they have not accomplished as much as they hoped, we feel a splendid lot of work has been done. Mrs. O. R. Mackie is chairman of the Wild Flower Committee at the present time, and with the co-operation of interested persons, has been working on a book to be used in the lower grades of the schools. We feel that the most good can be accomplished by teaching the children to appreciate and protect our wild flowers. Mrs. Mackie would appreciate hearing from anyone with suggestions or exchange of ideas. Everyone in our state should become interested in the preservation of our wild flower life before it is too late and they disappear entirely.

The wonderful results of the efforts of the Committee for Victory Gardens was more than gratifying. It received the whole-hearted support of the war-minded people of Lead. They had a fine display at the Flower Show, and everyone expressed surprise at the great variety of vegetables and the excellent quality.

This year prizes were dispensed with, and Red, Blue and White ribbons being used entirely as recognition. In years past we have given subscriptions to your Horticultural Magazine, and they have proved to be a coveted prize. I am enclosing pictures of the Sinking Gardens as proof of what can be accomplished and hope you can use them.

We are justly proud of the many beautiful yards and gardens on our city, just a mile above the sea. Many of the improvements in our yards is due to the untiring efforts of the members of the Garden Club."

On paper letter-headed with a charming garden scene the Aberdeen Garden Club president W. R. Polson writes, in part, about their Flowers for the Flowerless project for 1942. Through the newspapers the public was notified that any flowers they wished to give away might be left at a local place of business. Here three ladies arranged them and sent them to the shut-ins and home for aged. Aid of the Girl and Boy Scouts was enlisted in delivering the bouquets. How often I might have given surplus blossoms from my garden if some one would have taken the burden of their arrangement and delivery from my hands.

Mr. Polson also says: "Our aim is to have a beautiful yard at every home. A very good way is to invite your friends to each meeting and have a round table discussion. Try to have several garden tours during the summer and several garden shows, giving

(Continued on page 132)



BOOK REVIEWS

By
Mrs. F. Briley



Cactus Culture, by Ellen D. Schulz, director of the White Memorial Museum, San Antonio, Texas. Revised edition. Published by Orange Judd Publishing Co. Inc. 15 E. 26th St., New York, N. Y., 1942, price \$2.

From the introduction to the last chapter, "Feeding Cacti," the author shows very forcefully her love for all members of the cactus family. What's more, her enthusiasm bubbles over and the reader becomes filled with appreciation of their charm. All readers of this little volume will come to have an intelligent and satisfying understanding of cacti, remarkable examples of nature's creative art, and will draw from them some of the joy which has been the author's portion. The chapters include, How to recognize a cactus, How to start a cactus garden, Indoor and outdoor gardens, Other succulents, Nurslings and grafting, Insects and diseases. There are thirty plate illustrations and five text drawings. The frontispiece plate shows one of the most beautiful outdoor desert gardens in the world, the Huntington Botanical Garden, Los Angeles, Calif.

Desert Wild Flowers, by Edmund C. Jaeger, revised edition, Stanford University Press, Stanford, Calif., price \$3.50.

"The name of Edmund C. Jaeger on the title page of any volume is adequate certification of its excellence and this one is worthy of its predecessors." (Quarterly Review of Biology.) *Desert Wild Flowers* as a manual, and as a rule, that is explanatory in itself. But Jaeger's book isn't "just a manual" of desert flowers. It is more than that. Special attention has been given to the natural history of the desert plants rather than to their description. Features perhaps new to a popular flower handbook are the explanations of the meanings of scientific names and the short accounts of the more than one hundred fifty desert explorers commemorated in botanical names. Brevity has been stressed. Simple, dignified, and appropriate common names have been supplied to a majority of the desert plants, based upon some diagnostic character, a natural history feature, or a botanist's or collectors connection with the plant.

We amateurs are going to like this feature, and all horticulturists will want *Desert Wild Flowers*, by Jaeger. I hope it is permissible for me to step out

of my column for a little space, to welcome Juanita Jorgensen as a member of our staff. You have to live in Dell Rapids to know how efficient she is. For several years Mrs. Jorgensen did a mans work at the Jorgensen Feed Mill, which she and her husband operates, and now holds the position of office girl and general manager, I'd say. Besides, she manages a very orderly home, entertains her many friends, and cares for her yard, which I can safely say off-hand, has the largest variety of growing things in the city. Mrs. Jorgensen is no "joiner", as too many of us are, so the Horticultural Society, of which she is a life member, the Dell Rapids Garden Club, and the Woman's Club reap the benefits from her many accomplishments. She has one son Dean, who is in High School. The Horticultural Society is to be congratulated on procuring Mrs. Jorgensen as Editor of "Garden Club Gleanings."

THE OSPREY

(Continued from page 122)

rails only seven or eight feet above ground and had been used for 40 years. The birds paid little attention to the proprietor but objected to visitors. In popular nesting areas, all sorts of sites are used. Old windmill towers are used and telephone poles have sometimes been too popular. Frequently the land owners erect some sort of place for nesting, such as a post with an old wheel on top. Well known among western nests are those of Yellowstone National Park where the ospreys nest on rocky points along the Grand Canyon.

Only fresh fish are eaten, usually caught alive. Mr. Bent reports fish up to four pounds, but doubts that the hawk could carry one of eight pounds. He is also skeptical of the stories of the birds seizing larger fish and being drowned thereby. In a National Geographic article for July 1914, Howard H. Cleaves presented photos secured of the diving by using a painted wooden fish anchored by a stone and kept in motion. The fish was badly damaged in the encounter.

QUESTIONS AND ANSWERS (Continued from page 128)

for potato tuber decay. Care in handling potatoes should be exercised from the time digging starts until they are used. A broken place on the skin may not appear to be important, and a bruised place may not be detected. However, it is such injuries that permit the organisms responsible for decay to enter. If it is possible for you to place your potatoes at room temperature for a few days after digging some of these may "heal." Following that they should be stored at a temperature under 40 degrees if possible. Careful handling and low temperatures should reduce rot.



BOOK REVIEW

By
W. A. Simmons

The American Lily Year Book for 1942, published by The American Horticultural Society, 821 Washington Loan & Trust Bldg., Washington, D. C. Price \$1.25.

Edited by Dr. G. L. Slate, Geneva, N. Y., well known lily authority, son in law of the late E. H. Wilson, discoverer of the Regal and many other lilies, making his love for lilies very understandable, it includes articles by 27 of the best posted lily authorities in the United States and Canada, his book is a must have of all growers of this finest of flowers. It has 42 cuts illustrating various lilies and their bulbs and the few diseases that beset this flower, probably none of which the average grower will ever be plagued by, fully described and their avoidance explained. Perhaps one of the most interesting thing in this book is a stenographic transcription of a round table discussion by 14 of the foremost lily authorities, comprising 6 pages and covering many subjects. The veil of the future is lifted a little way to give us a glimpse of several lovely hybrids that will grace our gardens as soon as stocks of them can be created. This is the third lily year book put out by this Society and we hope they will be continued as they give us the best up to the minute information on this flower. If you are not already a lily grower I know of no book more certain to make you become one..

GARDEN NOTES

(Continued from page 125)

Mrs. Fanny Heath (we can say of the lady who introduced this lovely thing, she rests from her labors but her works do follow her,) and biennial tansy aster, a color bloc of orchid purple and amethyst violet, lovely but unplanned for the volunteer tansy asters have taken possession of any available untenanted space. Sept. 23rd. Nightly frosts again the order and a blustering 38 above zero equinoctial gale drives snow squalls across the prairie. I find the development of *Helianthus orgyalis* (weeping sun flower) an unfailing sign of seasonal change. During the hot days of early and mid-September flower buds develop a plump roundness, an indication that the end of summer approaches, for in this latitude our anticipation of really seeing what the flower is like remains a pious hope. But not so Harrington's pink frost resistant aster, the tops of whose upright, bushy 4 foot stems now become a glowing pink and my very last rose of summer happens to be a Hansa.

GARDEN CLUB CLEANINGS

(Continued from page 130)

small prizes or even a ribbon."

There is more from Mr. Polson's pen that must await another time, but in the meantime these suggestions should give each one of us something to think about and plan for in our own community and in the state as a whole.

Russetting of the rind of Florida oranges, usually caused by the rust mite or by the smooth melanose disease, does not seriously affect the quality of the juice or the vitamin C content. If russet oranges are selling at much of a discount they are likely to be the better buy..

According to the U. S. Dept. of Agriculture there are 78 principal field, nut, fruit and truck crops produced in this country. Of this number only 10 are native to the U. S., the rest having been brot in from other countries.—IDAHO NEWS LETTER.

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